REMARKS

Upon entry of this Response, claims 1-8, 10-20, 22-31, and 33-44 remain pending in the present patent application. Claims 12, 23, 27, 30, and 31 have been amended. Applicants respectfully request reconsideration of the pending claims in view of the following remarks.

In item 1of the Office Action, Applicant's prior request to remove the objection to the title had been declined. In this respect, the Examiner states:

> "Examiner believes a more descriptive title is beneficial to the Applicant, since, if issued, other Examiner's are more likely to find the patent and therefore utilize for a rejection if the title is descriptive. A generic, blank title such as "Evaluation of Image Processing Operations" tells the Examiner absolutely nothing about the invention and what it actually does. Furthermore, regarding the scope of the claims, the Examiner is concerned with the inventions preferred embodiment, not what it might possibly be used in." (Office Action, page 2).

Applicants respectfully wish to point out that the proposed title of "Evaluation of Resource Requirements for Image Processing Operations in an Image Scanner" is much more specific than the present claims. In particular, the image processing operations are not just scanning, but rather involve image processing operations such as printing and copying, *etc.*

In addition, the specific statement in the Office Action that "the Examiner is concerned with the inventions preferred embodiment, not what it might possibly be used in" implies that there is a preferred embodiment identified in the specification. However, the specification does not delineate a specific preferred embodiment. In particular, on page 5, the specification states that "an image processing operation is defined herein as scanning, copying, printing, or other task associated with image generation in the computer system and printing thereof."

To the extent that a scanning operation is further described in the specification, it is an example, as is specifically stated in the specification. Thus, Applicant objects to the characterization of any embodiment in the present application as a "preferred embodiment." Thus, Applicant proposes the title be amended to accord with the scope of the claims. In particular, Applicant proposes the title should be changed to "Evaluation of Resource Requirements for Image Processing Operations in an Image

Processing Device." If the Examiner disagrees with this proposed title, Applicant respectfully requests that the Examiner contact the undersigned.

Next, in Item 6 of the Office Action, claims 12 and 23 have been rejected under 35 U.S.C. §112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 12 and 23 have been amended to address this rejection. Also, claims 27, 30, and 31 have been amended so as to accord with the amendments of claim 23. Applicant respectfully requests that rejection of claims 12 and 23 be withdrawn.

In Item 7 of the Office Action, claims 1-19, 21-30, and 32-34 have been rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent 6,687,527 issued to Wu (hereafter "Wu"). A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). For the reasons that follow, Applicant asserts that rejection of claims 1-19, 21-30, and 32-34 is improper. Accordingly, Applicant requests that the rejection of these claims be withdrawn.

To begin, claim 1 recites as follows:

> 1. An image processing evaluation method, comprising:
> forecasting at least one image processing parameter of an image processing operation based upon at least one image processing setting, the image processing operation comprising one of an optical scanning of an image from a print medium, a copying of the image disposed on the print medium, or a printing of the image on the print medium;
> displaying the at least one image processing parameter on a display device;
> altering the at least one image processing setting based upon a user setting input;
> re-forecasting the at least one image processing parameter based upon the at least one image processing setting altered by the user setting input; and
> performing a preoperative task based upon a user input in response to the display of the at least one image processing parameter.

With respect to claim 1, the Office Action states as follows:

> "With regards to claim 1, Wu discloses in column 7, lines 21-28, "using the graphical user interface 60, the associated user can select and modify

scan sequence parameters such as the scan time, scan resolution, inter-echo spacing, bandwidth, time-to-echo, and the like. Typically, as many as thirty to fifty parameters are included for defining an imaging scan. The various parameters are interrelated, insofar as the values of certain parameters effectively constrain the values of certain other parameters. Additionally, parameters limits exist." Wu further discloses in column 8, lines 26-33, "after receiving values for selectable MRI operating parameters from the associated user, either through the entry of individual values or by selection of a can from the master database memory 68, the user interface processor 60 calculates parameter limits and monitor parameter values therefrom. The results are displayed to the user, preferably in a graphical format, on the display 50."

Therefore, the parameters in Wu are analogous to the settings, and the monitor parameters are analogous to the parameters of the applicant's invention. FIG. 3 shows that the monitor parameter values are calculated, or "forecasted" in step 510, which is part of a loop. Therefore, the user may "alter the at least one image processing setting based upon a user input" in step 524, at which point the flow loops back to 508, and subsequently, 510, thus "re-forecasting the number of image processing parameters based upon the at least one image processing setting based upon the at least one image processing setting altered by the user setting input." Finally, it is obvious that at step 522 the user may initiate either a simulation scan 544, MRI scan 542, and optimization algorithm 530, thus qualifying as "performing a preoperative task based upon a user input in response to the display of the image processing parameters."

Wu does not expressly disclose "the image processing operation comprising one of an optical scanning of an image from a print medium, a copying of the image disposed on the print medium, or a printing of the image on the print medium," as required by the applicant's amendment.

However, Examiner takes official notice in asserting that copying machines were well-known in the industry at the time of invention. Copy machines optically scan an image from a print medium, copy the image into memory, and/or print the image onto another print medium (official notice).

Wu and copy machines are combinable because they both deal with the scanning of an image into memory.

Therefore, it would have been obvious at the time of invention to one of normal skill in the art to include in a standard copy machine an evaluation program as taught by Wu.

The motivation of this modification would be to automatically evaluate the capabilities of the copy machine in order to prevent settings which are beyond said capabilities.

Thus it would have been obvious to combine Wu with a copy machine to obtain the invention of claim 1." (Office Action, pages 4-5).

Applicants respectfully disagree. First, Wu does not show or suggest forecasting image processing parameters of an image processing operation based upon an image processing setting. Rather, Wu is focused on describing the specification of settings of

an MRI scanning device for its operation given the many modes that exist for MRI scanning due in part to the many different parts of the body that can be scanned and due to the many different settings given the complexity of the operation of an MRI scanner. However, Wu fails to make a distinction between image processing settings and image processing parameters. In this respect, all of the "parameters" described by Wu are actually settings of the MRI device. The mere used of the word "parameters" does not mean that such elements are the same as the parameters of an image processing operation based on settings. Therefore, Applicant asserts that Wu fails to show or suggest forecasting image processing parameters of an image processing operation based upon the image processing settings.

In addition, the Office Action specifically states:

> "Wu does not expressly disclose "the image processing operation comprising one of an optical scanning of an image from a print medium, a copying of the image disposed on the print medium, or a printing of the image on the print medium," as required by the applicant's amendment.
> However, Examiner takes official notice in asserting that copying machines were well-known in the industry at the time of invention. Copy machines optically scan an image from a print medium, copy the image into memory, and/or print the image onto another print medium (official notice).
> Wu and copy machines are combinable because they both deal with the scanning of an image into memory.
> Therefore, it would have been obvious at the time of invention to one of normal skill in the art to include in a standard copy machine an evaluation program as taught by Wu.
> The motivation of this modification would be to automatically evaluate the capabilities of the copy machine in order to prevent settings which are beyond said capabilities."

Applicants respectfully disagree. First, the Manual of Patent Examining Procedure (MPEP) defines the standard for taking official notice of various claim limitations that are not shown or references asserted. In §2144.03 on taking office notice, the MPEP provides as follows:

> "Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the

> examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)).

Applicants respectfully traverse the Examiner's assertion of official notice regarding the element of "optical scanning of an image from a print medium, a copying of the image disposed on the print medium, or a printing of the image on the print medium" as set forth above. The mere fact that copy machines may have existed at the time of the invention as noted by the Examiner does not mean that Wu can easily be combined with a copy machine. Applicant asserts that an MRI device is much more complicated and includes many more settings than does the typical copy machine. Also, MRI devices operate to manipulate entirely different physical principles.

In addition, Applicant asserts that Wu is nonanalogous with respect to the technology as set forth in the present claims. Use of references in a rejection is improper if one of ordinary skill would not have reasonably consulted them and applied their teaching in seeking a solution to the problem addressed by the instant invention. *Heidelberger Druckmaschinen v. Hantscho Commercial Products*, 21 F.3d 1068, 1071, 30 USPQ2d 1377 (Fed. Cir. 1994). This speaks to the fact that the inventor can not possibly be aware of every teaching in every art. *Application of Wood*, 599 F.2d 1032, 036, 202 USPQ 171 (CCPA 1979). If the reference is within the field of the inventor's endeavor, then it is analogous. *In re Oetiker*, 977 F.2d 1443 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *Application of Wood*, 599 F.2d 1032, 036, 202 USPQ 171 (CCPA 1979). Also, if the reference is reasonably pertinent to the particular problem addressed by the invention, then it is analogous. *Application of Wood*, 599 F.2d 1032, 036, 202 USPQ 171 (CCPA 1979).

Magnetic resonance imaging machines are used in the medical field, where as the technology involved in copy machines is not considered a medical device. Also, magnetic resonance imaging involves the excitation of magnetic nuclear resonances in

a subject, whereas imaging devices as set forth in claim 1 involve optical scanning, printing or copying. As a consequence, Applicant respectfully asserts that it is unreasonable to assume that an inventor who works in the field of optical scanning, printing, or copying would look to magnetic resonance imaging systems to aid in their endeavors. Thus, magnetic resonance imaging is not in the field of the endeavor of the Applicant of the present patent application.

In addition, systems employed for magnetic resonance imaging are not reasonably pertinent to the problems addressed by the present invention. The considerations that are taken into account in creating MRI systems are more complicated and depend upon an understanding physical sciences that are very different from the principles underlying the invention as set forth in the instant claims. As a consequence, MRI systems are dedicated systems such as computer control systems that are specifically configured to facilitate their operation. This contrasts, for example, with the scanner or printer (see FIG. 1) of the present invention that may be coupled to many different computer systems and, as a result, the functionality of these devices will vary depending upon the capabilities of the host system.

Accordingly, Applicant asserts that Wu is not analogous to the technology of the present application and is improperly used as a reference in generating the instant rejections.

In addition, Applicant asserts that Wu teaches away from the combination with a copy machine for which official notice is taken. In particular, Wu describes a self-contained magnetic resonance imaging system that includes dedicated processing systems or computer systems that are configured to facilitate the operation of such devices. In contrast, a scanner, printer, or other device of the present invention, may be coupled, for example, to any number of different host computer systems or other systems. These systems might vary in their capabilities that may or may not result in the problems addressed by the various embodiments of the present invention.

The problems addressed by the various embodiments of the present invention are not at issue in the context of Wu as magnetic resonance imaging systems include dedicated processing systems and do not potentially have the problem of being linked to processors that are incapable of performing the operations necessary for scanning

within the MRI itself. The imaging data that is obtained from a magnetic resonance imaging system is more complex and much larger requiring dedicated processing systems that can handle the quantities of data generated. It is not the case that an MRI scanning capability will be mated with a host computer that might not provide adequate processing resources, resulting in scans that take too much time or too much memory, *etc.* As a consequence, Wu teaches away from being combined with a copy machine as is done in the Office Action.

It follows that combination of a magnetic resonance imaging system as described by Wu and a copy machine as set forth in the Office Action can only be the product of hindsight reconstruction using the claims of the present invention as a blueprint. Hindsight is impermissible in constructing a case of obviousness. *In re Rouffett*, 149 F. 3d. 1350, 47 US Pq2nd 1453 (Fed. Cir 1998). In addition, given that Wu teaches away from any combination with copy machines as set forth by the Official Notice in the Office Action, Applicant asserts that there is no motivation to make the combination of Wu and the subject matter of the Official Notice.

In addition, under 37 C.F.R. §1.104(d)(2), when a rejection in an application is based on the facts within the personal knowledge of an Examiner, it should be as specific as possible. When called for by the Applicant, the Examiner must support the assertion with an affidavit which is subject to contradiction or explanation by the affidavits of the Applicant or other persons. Given that official notice is taken of the subject matter set forth above, it necessarily follows that the rejection of the application is based upon facts within the personal knowledge of the Examiner. Applicants hereby call on the Examiner to support the assertions made with an affidavit that may be subject to contradiction by the Applicant, or that the Examiner provide a proper reference to effect the rejection of the instant claims. Applicant asserts that if a new reference is brought forth, then the finality of this Office Action must be withdrawn.

Thus, for the foregoing reasons, Applicant asserts that the rejection of claim 1 is improper. In addition Applicant asserts that the rejection of claims 12, 23, and 34 is improper for the same reasons described above with respect to claim 1 to the extent that such reasons apply. Accordingly, Applicant requests that the rejection of claims 1,

12, 23, and 34 be withdrawn. In addition, Applicant requests that the rejection of claims 2-11, 13-19, 22, 24-30, and 33 be withdrawn as depending from claims 1, 12, or 23.

Next, in Item 8 of the Office Action, claims 20, 31, and 35-44 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Wu in view of US Patent 6,850,653 issued to Abe (hereafter "Abe"). A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). First, Applicant notes that claims 20 and 31 depend ultimately from claims 12 and 23. Accordingly, Applicant traverses this rejection of claims 20 and 31 for the same reasons described above with respect to claims 12 and 23. Therefore, Applicant requests that the rejection of claims 20 and 31 be withdrawn for the reasons described above with respect to claims 12 and 23 to the extent that the apply.

In addition, Applicant traverses the rejection of independent claims 35 and 40 for the same reasons described above with respect to claim1 to the extent that they apply. In addition, Applicant traverses the rejection of claims 36-39 and 31-44 as depending from claims 35 and 40, respectively. Accordingly, Applicant respectfully requests that the rejection of claims 35-44 be withdrawn.

CONCLUSION

It is requested that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding this Response, the Examiner is encouraged to telephone the undersigned counsel of Applicants.

Respectfully submitted,

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